

REMARKS

In accordance with the foregoing, claims 1, 9, 14, and 19 are amended. No new matter is added. Claims 6-8 were previously cancelled. Claims 1-5 and 9-19 are pending and under consideration.

NON-FINAL OFFICE ACTION

On the Office Action Summary page of the Office Action mailed December 31, 2008, the action is indicated as being final. However, the finality is improper after an RCE filed after an Advisory Action indicating that new search is required. The PAIR indicates that the action is non-final. Applicants representative has tried repeatedly to contact the Examiner to make of record the fact that the action is non-final. On May 29, 2009, Applicant's representative discussed this matter with Mrs. Karen Matecki, who confirmed that all the records in the USPTO indicated the Office Action mailed December 31, 2008 as being **non-final**, and that the indication on the Office Action Summary page is likely a clerical error without legal consequence. *directors of the Technology Center,* ✓ *that*

CLAIM REJECTIONS UNDER 35 U.S.C. §112

Claims 1-5, and 9-19 are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement relative to the recitation "the control unit controls the optical amplifying unit such that the gain of the total light power remains constant."

Applicants respectfully directs Examiner's attention to the originally filed specification, *for example,* page 12, line 23 to page 13, line 29, and page 15, line 35 to page 16, line 5. Further, on page 18, lines 14-18, page 19, lines 1-2, and FIG. 11, Applicants use the term "flat" relative to gain. A person of ordinary skill in the art would understand that maintains a gain "flat" means maintaining the gain to be constant. ✓ *in*

In view of the above explanations, Applicants respectfully request that the rejection under 35 U.S.C. §112, first paragraph, ~~be~~ be withdrawn.

Claims 14-18 are rejected under 35 U.S.C. §112, second paragraph as being unclear. Applicants made a good faith effort herewith to clarify the claimed subject matter. In view of the claim amendments applicants respectfully request the rejection under 35 U.S.C. §112, second paragraph to be withdrawn. *have*

CLAIM REJECTIONS UNDER 35 U.S.C. §102

Claims 1, 3-5, 9, 11-14 and 16-19 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 6,038,062 to Kosaka (hereinafter "Kosaka").


Kosaka discloses:

With the above construction, when the trunk line system is normal and the probe light beam is normally inputted, the drive current of the pump laser 21, that is, the amount of operation on the erbium added optical fiber serving as the optical amplifying medium of the pump laser standing for the exciting source is feedback-controlled such that the light output of the probe light beam λ_p monitored by the light receiving unit 28 can be kept to be constant. This keeps the gain state in the erbium added optical fiber 22 constant and hence makes it possible to keep constant the optical gain states (outputs) of the plurality of signal light beams λ_1 , λ_2 , λ_3 and λ_4 which are inputted concurrently. As a result, the light outputs of the signal light beams λ_1 , λ_2 , λ_3 and λ_4 can each be maintained at a predetermined value and can be stabilized. (See col. 7, lines 31-45 of Kosaka.)

Thus, Kosaka teaches that the erbium added optical fiber (i.e. the optical amplifying unit) is controlled such that **the gain of the probe light power remains constant**. According to such an arrangement, when "the trunk line system is normal and the probe light beam is normally inputted," "the light outputs of the signal light beams λ_1 , λ_2 , λ_3 and λ_4 can each be maintained at a predetermined value."

However, when the trunk line system is NOT normal and the probe light beam is NOT normally inputted (that is, it deviates), the gain of the erbium added optical fiber is NOT kept constant. **ONLY the light output of the probe light beam λ_p monitored by the light receiving unit 28 is controlled to be constant.**

In Kosaka, it is not possible to keep constant the optical gains (outputs) of the plurality of signal light beams λ_1 , λ_2 , λ_3 and λ_4 which are inputted concurrently. Thus, the optical output level of the plurality of signal light beams including but not limited to λ_p may vary.

In contrast, the optical amplifying apparatus of claims 1 has a control unit "controlling the optical amplifying unit [...] such that a gain of the total light power remains constant." The claimed optical amplifying apparatus maintains the optical output level of the plurality of signal light beams constant, even when the trunk line system is NOT normal and the probe light beam is NOT normally inputted. 

In view of the above, independent claim 1 and claims 2-5 depending from claim 1, patentably distinguish over the prior art at least because Kosaka fails to anticipate "the control unit controls the optical amplifying unit such that a gain of the total light power remains constant" as recited in claim 1.

In view of the above discussion of the cited prior art's teachings, independent claim 9 and

claims 10-13 depending from claim 9 patentably distinguish over the prior art at least because Kosaka fails to anticipate "wherein the control unit controls the optical amplifying unit such that a gain of the total light power remains constant" as recited in claim 9.

In view of the above discussion of the cited prior art's teachings, independent claim 14 and claims 15-18 depending from claim 9 patentably distinguish over the prior art at least because Kosaka fails to anticipate "the control unit controls the first and the second optical amplifying unit such that a gain of the total light power remains constant" as recited in claim 14.

In view of the above discussion of the cited prior art's teachings, independent claim 19 patentably distinguishes over Kosaka at least by reciting "the control unit controls the optical amplifying unit such that a power gain of the wavelength division multiplexed signals remains constant."

CLAIM REJECTIONS UNDER 35 U.S.C. §103

Claims 2, 10, and 15 are rejected under 35 U.S.C. §102(b) as allegedly being unpatentable over Kosaka in view of U.S. Patent No. 6,008,935 to Fujita ("Fujita").

Applicants ^{have} found no evidence that Fujita corrects or compensates for the above-identified failure of Kosaka to anticipate or render obvious all the features of independent claims 1, 9, and 14. Therefore, claims 2, 10 and 15 are patentable at least by inheriting patentable features from claims 1, 9, and 14, respectively.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

Serial No. 10/639,467

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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